

WHAT IS CLAIMED IS:

1. A cell-line which replicates hepatitis C virus (HCV), wherein said cell line is selected from the group
5 consisting of a non-human cell line and a human non-hepatic cell line.
2. The cell line of claim 1, wherein the human non-hepatic cell line comprises epithelial cells.
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3. The cell line of claim 2, wherein the human epithelial cells are HeLa cells.
4. The cell line of claim 1, wherein the non-human
15 cell line comprises mouse cells of hepatic origin.
5. The cell line of claim 4, wherein the mouse cells are Hepal-6 cells.
- 20 6. The cell line of claim 4, wherein the mouse cells are AML12 cells.
7. A non-human, non-chimpanzee host animal comprising cells which replicate HCV.
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8. The non-human host animal of claim 7, which is a mouse.
9. A method for producing a human non-hepatic cell
30 that replicates HCV, comprising:
 - a) obtaining total RNA from a human hepatic cell culture that replicates HCV, said total RNA comprising a selection marker which renders cells expressing said RNA resistant to a selection agent;
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 - b) introducing the total RNA into human non-

hepatic cells; and

c) selecting those cells which grow in the presence of said selection agent and replicate HCV.

5 10. The method of claim 9, wherein a cell line is generated from the cells of step c).

11. A method of producing a non-human hepatic cell that replicates HCV, comprising:

10 a) obtaining total RNA from a human non-hepatic cell culture that replicates HCV, said total RNA comprising a selection marker which renders cells expressing said RNA resistant to a selection agent;

15 b) introducing the total RNA into non-human cells; and

c) selecting those cells which grow in the presence of said selection agent and replicate HCV.

20 12. The method of claim 11, wherein a cell line is generated from the cells of step c).

13. A method for screening test compounds which inhibit HCV replication, comprising:

25 a) culturing the cell line of claim 1 in the presence and absence of a test compound; and

30 b) assaying HCV replication levels in the presence and absence of said test compound, wherein a reduced HCV replication level in the presence of said test compound is indicative that said test compound inhibits HCV replication.

14. An HCV polynucleotide having at least one of the mutations shown in Table II.

35 15. A polyprotein encoded by the polynucleotide of

claim 14.

16. A method for screening test compounds which modulate the antiviral response induced by interferon
5 alpha (IFN- α) comprising
a) culturing the cell line of claim 1 in the presence and absence of a test compound;
b) contacting the cells of step a) with IFN- α ; and
c) measuring the HCV replication level in the
10 presence and absence of said compound thereby identifying agents which modulate the antiviral response mediated by IFN- α as a function of altered HCV levels.

17. The method of claim 16, wherein the antiviral
15 response is enhanced.

18. The method of claim 16, wherein the antiviral response is inhibited.

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